

AMENDMENTS TO THE CLAIMS

The following is a complete listing of the claims, which replaces all previous versions and listings of the claims.

Listing of the Claims

1. (Previously presented) A one trip method of tensioning and sealing a tubular string to a wellhead, comprising:
running the tubular string and a seal assembly together into the wellhead;
securing the string downhole;
securing the seal assembly in the wellhead; and
applying and retaining a tensile force on the string after securing the seal assembly to the wellhead and after securing the string downhole.

2. (Cancelled)

3. (Currently amended) A one trip method of tensioning and sealing a tubular string to a wellhead, comprising:
running the tubular string and a seal assembly together into the wellhead;
securing the string downhole;
positioning the seal assembly in contact with the wellhead; [[and]]
pulling a tensile force on the string, ~~all in one trip~~; and
allowing a lock ring to move between said seal assembly and the wellhead to secure said seal assembly in the wellhead prior to said pulling, all in one trip.

4. (Currently amended) A one trip method of tensioning and sealing a tubular string to a wellhead, comprising:
running the tubular string and a seal assembly together into the wellhead;
securing the string downhole;

positioning the seal assembly in contact with the wellhead; [[and]]
pulling a tensile force on the string, ~~all in one trip~~;
allowing a lock ring to move between said seal assembly and the wellhead to
secure said seal assembly in the wellhead;
using a running tool to deliver said string and seal assembly; and
releasing said lock ring using said running tool, all in one trip.

5. (Original) The method of claim 4, comprising:
retaining said string with the running tool after releasing said lock ring.

6. (Original) The method of claim 5, comprising:
releasing the lock ring by rotation of the running tool.

7. (Original) The method of claim 4, comprising:
using the running tool to pull tension on said string;
locking in the tension with a ratchet.

8. (Currently amended) ~~A one trip method of tensioning and sealing a
tubular string to a wellhead, comprising:~~
~~running the tubular string and a seal assembly together into the wellhead;~~
~~securing the string downhole;~~
~~positioning the seal assembly in contact with the wellhead; and~~
~~pulling a tensile force on the string, all in one trip;~~
~~allowing a lock ring to move between said seal assembly and the wellhead to~~
~~secure said seal assembly in the wellhead;~~
~~using a running tool to deliver said string and seal assembly;~~
~~releasing said lock ring using said running tool;~~
~~using the running tool to pull tension on said string;~~
~~locking in the tension with a ratchet;~~

The method of claim 7, comprising:

providing a biased dog in a groove on said string having at least one exterior tooth;
securing a ratchet rack to said seal assembly;
moving said dog with respect to said rack while tension is applied; and
allowing said dog to retain said tension when said tooth jumps into an adjacent depression in said rack.

9. (Original) The method of claim 8, comprising:
building in said bias integrally into said dog.

10. (Currently amended) A one trip method of tensioning and sealing a tubular string to a wellhead, comprising:
running the tubular string and a seal assembly together into the wellhead;
securing the string downhole;
pulling a tensile force on the string;
pulling said tensile force on said string before positioning said seal assembly in the wellhead; and
advancing said seal assembly relative to said string and into said wellhead after said pulling of said tensile force.

11. (Cancelled)

12. (Currently amended) A one trip method of tensioning and sealing a tubular string to a wellhead, comprising:
running the tubular string and a seal assembly together into the wellhead;
securing the string downhole;
pulling a tensile force on the string, ~~all in one trip~~;

pulling said tensile force on said string before positioning said seal assembly in the wellhead;

advancing said seal assembly into said wellhead during or after said pulling of said tensile force; and

using a mechanical force applied to said seal assembly for said advancing, all in one trip, wherein the mechanical force is independent of the tensile force.

13. (Original) The method of claim 10, comprising:
using a running tool to insert said string and said seal assembly into the wellhead:
advancing said seal assembly by moving it into the wellhead with respect to said running tool.

14. (Currently amended) A one trip method of tensioning and sealing a tubular string to a wellhead, comprising:
running the tubular string and a seal assembly together into the wellhead;
securing the string downhole;
pulling a tensile force on the string, ~~all in one trip~~;
pulling said tensile force on said string before positioning said seal assembly in the wellhead;
advancing said seal assembly into said wellhead during or after said pulling of said tensile force;
using a running tool to insert said string and said seal assembly into the wellhead:
advancing said seal assembly by moving it into the wellhead with respect to said running tool; and
releasing a lock, after said advancing, to secure said seal assembly to the wellhead with said running tool, all in one trip.

15. (Original) The method of claim 1, comprising:
securing said seal assembly to a hanger; and

securing the hanger and seal assembly to the wellhead.

16. (Original) The method of claim 10, comprising:
securing said seal assembly to a hanger; and
securing the hanger and seal assembly to the wellhead.

17. (Original) The method of claim 14, comprising:
securing said seal assembly to a hanger; and
securing the hanger and seal assembly to the wellhead.

18. (Currently amended) ~~A one trip method of tensioning and sealing a tubular string to a wellhead, comprising:~~
~~running the tubular string and a seal assembly together into the wellhead;~~
~~securing the string downhole;~~
~~pulling a tensile force on the string, all in one trip;~~
~~pulling said tensile force on said string before positioning said seal assembly in the wellhead;~~
~~advancing said seal assembly into said wellhead during or after said pulling of said tensile force;~~
~~using a running tool to insert said string and said seal assembly into the wellhead;~~
~~advancing said seal assembly by moving it into the wellhead with respect to said running tool;~~
~~releasing a lock, after said advancing, to secure said seal assembly to the wellhead with said running tool;~~
~~securing said seal assembly to a hanger; and~~
~~securing the hanger and seal assembly to the wellhead;~~
The method of claim 17, comprising:
providing a biased dog in a groove on said string having at least one exterior tooth;

securing a ratchet rack to said hanger;
moving said dog with respect to said rack while tension is applied; and
allowing said dog to retain said tension when said tooth jumps into an adjacent depression in said rack.

19. (Previously presented) The method of claim 18, comprising:
providing a seal between said string and said rack during relative movement between them.

20. (Original) The method of claim 8, comprising:
providing a seal between said string and said rack during relative movement between them.

21. (Currently amended) A one trip method of tensioning and sealing a tubular string to a wellhead, comprising:
running the tubular string and a seal assembly together into the wellhead;
securing the string downhole;
pulling a tensile force on the string, ~~all in one trip~~;
pulling said tensile force on said string before positioning said seal assembly in the wellhead;
advancing said seal assembly into said wellhead after said pulling of said tensile force; and
using a hydraulic piston to advance said seal assembly, all in one trip, wherein said pulling is a different motion from said advancing.

22. (Currently amended) A method of tensioning and sealing a tubular string to a wellhead, comprising:
advancing a tubing string and a seal assembly into the wellhead concurrently;

~~securing~~ moving the seal assembly into a secured position with respect to the wellhead; and

applying tension to the tubing string after ~~said securing~~ of the seal assembly is in the secured position with respect to the wellhead, wherein moving is different than applying tension.

23. (New) A method for tensioning and sealing a tubular string to a wellhead, comprising:

running a tubular string and a seal assembly together into a wellhead;

securing the string downhole;

applying a mechanical force to the seal assembly to advance the seal assembly into the wellhead; and

applying a tensile force to the string to advance the string in the seal assembly, all in one trip, wherein the tensile force and the mechanical force are applied in different directions.

24. (New) A system for tensioning and sealing a tubular string to a wellhead, comprising:

a seal assembly comprising a lock ring configured to secure the seal assembly to a wellhead and a ratchet configured to secure a tubular string to the seal assembly in a tensile state, all in one trip;

a running tool configured to run the string and the seal assembly together into the wellhead; and

at least one of a seal bore or packer configured to secure the string downhole.